



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,822	01/16/2002	Takashi Aoki	111673	2396

7590 11/13/2003

Oliff & Berridge
PO Box 19928
Alexandria, VA 22320

EXAMINER

FULLER, RODNEY EVAN

ART UNIT	PAPER NUMBER
----------	--------------

2851

DATE MAILED: 11/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/030,822	Applicant(s) AOKI ET AL.	
	Examiner Rodney E Fuller	Art Unit 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because it exceeds the 150-words limit.

Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-3, 6-9, 12, 13, 15 and 24-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Davison, et al. (US 5,997,963).

Regarding claims 6 and 27-29, Davison discloses guide member (Fig. 1, ref.# 7) which is arranged between the second object (Fig. 1, ref.# 14) and the projection optical system (Fig. 1,

Art Unit: 2851

ref.# 34) and which is provided with an aperture (Fig. 1, ref.# 6) for allowing the exposure light beam having passed through the projection optical system to pass there through; and a gas supply unit (Fig. 1, ref.# 9) which supplies a gas through which the exposure light beam is transmitted, through the aperture of the guide member toward the second object.”

Regarding claims 7 and 27-29, Davison discloses “a gas-aspirating unit (Fig. 1, ref.# 12) which aspirates the gas flowing through a space between the guide member and a surface of the second object toward an outer circumferential side of the second object.”

Regarding claim 8, Davison discloses “wherein an optical member (Fig. 1, ref.# 5) of the projection optical system, which is disposed at a position closest to the second object (Fig. 1, ref.# 14), is also used as the guide member.”

Regarding claim 9, Davison discloses “a stage (Fig. 1, ref.# 3) which positions the second object, wherein a height of an upper surface of the stage is substantially the same as a height of a surface of the second object.”

Regarding claim 12, Davison discloses “wherein the exposure light beam (Fig. 1, ref.# 36) is a light beam in a wavelength region in which the light beam is greatly absorbed by oxygen, and the gas is chemically inert (column 3, line 10), from which any impurity is removed.”

The method steps of claims 1-3, 13, 15, 24-26 are met by the operation of Davison as applied to claims 6-9 and 12.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4, 5, 10, 11, 14 and 16-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davison, et al. (US 5,997,963).

Davison discloses all the structure set forth in the claims, except in claim 10, wherein the control unit (Fig. 1, ref.# 8) "...controls a state of flow of the gas supplied by the gas unit, depending on a position of the stage." It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the control unit in Davison control "a state of flow of the gas supplied by the gas supply unit, depending on a position of the stage," in order to shorten a time required to purge gas in an optical space with inert gas, and/or maintain the purity or concentration of inert gas in the optical path space at a proper level.

The method steps of claims 4, 5, 14, 16-18 are met by the operation of Davison as applied to claims 10, 11 and 19-23.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Clave, et al. (US 3,321,265), Borberg, et al. (US 3,310,356), Kawamura, et al. (US 4,477,183), Murakami (US 4,901,668), Klebanoff, et al. (US 6,153,044), Kosugi, et al.

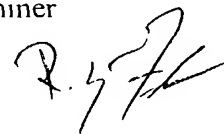
(US 4,786,947), McCullough, et al. (US 5,973,764), Inoue, et al. (US 6,133,982), Komoriya, et al. (US 4,699,505), Mori, et al. (US 5,063,582) and Fujioka (US 5,134,436) each disclose an apparatus and/or method “for exposing a second object via a projection optical system with an exposure light beam having passed through a pattern on a first object” and “supplying a gas through which the exposure light beam is transmitted, from a tip or interior of the projection optical system toward an exposure are on the second object.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney E Fuller whose telephone number is 703-306-5641. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 703-308-1436. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.

Rodney E Fuller
Primary Examiner
Art Unit 2851



November 3, 2003